

**CLAIMS:**

What is claimed is:

1. A method for assessing endothelial function, comprising:
  - a. providing a vasodilating stimulant to a patient to stimulate hemodynamic activity in a selected region of the patient's body;
  - b. monitoring a change in a hemodynamic parameter at the selected region; and
  - c. assessing the patient's endothelial function based upon said monitoring.
2. The method of claim 1, wherein providing a vasodilating stimulant comprises:
  - a. compressing the patient's brachial artery for a predetermined period of time; and
  - b. ceasing said compression after said predetermined period of time.
3. The method of claim 2, wherein said monitoring further comprises monitoring a change in temperature at one of the patient's fingertips.
4. The method of claim 1, wherein providing a vasodilating stimulant comprises occluding blood flow in the patient's arm.
5. The method of claim 4, wherein said monitoring comprises monitoring a change in temperature in the patient's arm.
6. The method of claim 5, wherein monitoring the change in temperature in the patient's arm is accomplished by placing at least two temperature sensors proximate the patient's forearm.

7. The method of claim 6, wherein the temperature sensors are piezoelectric sensors.
8. The method of claim 1, wherein the hemodynamic parameter is at least one of (i) blood temperature, (ii) blood oxygen content, or (iii) blood flow rate.
9. The method of claim 1, wherein providing a vasodilating stimulant comprises occluding blood flow in the patient's leg.
10. A method for measuring endothelial function, comprising:
  - a. providing a vasodilating stimulant to a patient to stimulate hemodynamic activity in a selected region of the patient's body;
  - b. monitoring a change in blood oxygen content at the selected region; and
  - c. assessing the patient's endothelial function based upon said monitoring.
11. The method of claim 10, wherein said monitoring is accomplished by taking measurements with a pulse oximeter.
12. The method of claim 11, wherein said pulse oximeter is placed proximate the tip of one of the patient's fingers.
13. A method for measuring endothelial function, comprising:
  - a. providing a vasodilating stimulant to a patient to stimulate hemodynamic activity in a selected region of the patient's body;
  - b. monitoring a change in blood flow rate at the selected region; and
  - c. assessing the patient's endothelial function based upon said monitoring.

14. The method of claim 13, wherein said monitoring is accomplished by taking measurements with a photoplethysmograph placed proximate one of the patient's fingers.

15. The method of claim 13, wherein said monitoring is accomplished by taking an ultrasound Doppler measurement.

16. The method of claim 13, wherein providing a vasodilating stimulant comprises:

- a. compressing one of the patient's arteries located in an outer extremity of the patient's body for a predetermined period of time; and
- b. ceasing said compression after said predetermined period of time.

17. The method of claim 16, wherein the extremity is at least one of (i) a leg, (ii) an arm, (iii) a wrist, of (iv) a finger.

18. The method of claim 17, wherein said monitoring occurs from a time prior to the beginning of said compression until a time after said ceasing when said blood flow has stabilized.

19. The method of claim 18, further comprising plotting measured blood flow as a function of time.

20. The method of claim 19, further comprising plotting the change in blood flow as a function of time.